

- - ABSTRACT OF THE DISCLOSURE

A method for detecting aberrant phenotypes expressed by neoplastic cells includes the steps of: 1) staining one or more normal/reactive samples and one neoplastic sample with multiple combinations of monoclonal antibodies, 2) measuring fluorescence emissions associated to the stained cells, 3) storing two independent list mode data files of information on light scatter and fluorescence characteristics of each cell, 4) creating new data files by mixing list mode data from the data file containing information the neoplastic sample into the data file containing information on the normal samples, 5) defining corresponding to normal cells and areas corresponding to empty spaces in normal/reactive samples that may be occupied by tumor cells in neoplastic samples, 6) identifying events corresponding to neoplastic cells and events corresponding to normal cells coexisting in a multidimensional space, and 7) establishing the most relevant phenotypic aberrations displayed by the neoplastic cells as compared to their normal counterpart. - -